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EXAMINER	
PATEL, JAYESH A	

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2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/776,534	TAKAMIDOH, KENYA	
	Examiner	Art Unit	
	JAYESH A. PATEL	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments see remarks page 9-17, filed 01/08/2009, with respect to the rejection(s) of claim(s) 1-28 have been considered and made of record. The arguments are moot in view of the amendments. The rejection is presented below.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Determining **"based on the geometric criteria"** a level of certainty--- is not defined or explained in the specification. The specification on page 2 lines 7-15 does not describe a standard "criteria" for determining the level of certainty based on the geometry. Claims 2-21, 23, 25, 27-28 depends directly or indirectly on the independent claims 1,4 and 7 therefore they are rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10, 14,16,19, 21,23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable Blank (US. 5345313) hereafter Blank in view of Kinjo (US 5978100) hereafter Kinjo and in further view of Wilensky (US 7003061) hereafter Wilensky as best understood by the examiner.

1. Regarding claim 1, Blank discloses a portrait image processing method in **(Fig 6)** comprising the steps of: extracting a portrait image from an original image including a person and a background **(Col 2 Lines 60-68 by extracting the portions inside and outside of the edge thereby extracting the portrait from the background and Col 9 Lines 3-8)**; compositing the extracted portrait image and a background image prepared in advance **(integrating into a preselected background)** to create a composite image at **(Col 3 Lines 56-67)**; detecting a boundary of the person and the background from the original image at **(Col 2 Lines 60-67,Col 9 Lines 3-14 and Col 8 Lines 44-49)**.Blank discloses detecting the contour of a person as seen in Figs **(5A-5E)** and **(7A-7d)** and Blank also discloses applying the correction and applying correction processing to a boundary part which is judged not to be a true contour of the person **(Col 4 Lines**

28-33 where the correction is applied to the object (which has a boundary) and the background as seen in the fig7C), for concealing the boundary part **(contiguous to the edge)** in the created composite image at **(Col 4 Lines 17-27, Col 9 Lines 36-45 and Figs 5d-5e).** Blank is silent and however does not expressly recite determining based on the geometric criteria a level of certainty as to whether or not the detected boundary is a true contour of the person for each part of the detected boundary and applying correction processing to a boundary part which is less than the entire detected boundary and which is judged not to be a true contour of the person, for concealing the boundary part, in the created composite image.

Kinjo discloses determining, based on the geometric criteria **(extraction based on their shapes coinciding i.e a degree of certainty based on the shapes or geometric criteria at Col 25 lines 33-37)** a level of certainty as to whether or not the detected boundary is a true contour of the person for each part of the boundary at **(Kinjo discloses extracting the shape corresponding to the principal region i.e face of the person and eliminates the region corresponding to the background Col 9 lines 29-39 and Col 18 Lines 10-20, Col 18 lines 53-65 where each portion of the non-background (face of the human) region is extracted (detected) due to the determination of the each region being the background region. The level of certainty is determined by the regions overall weighting coefficient. The region with the highest score is the region having the highest probability of being a face (contour of a**

person) of the human figure (level of certainty at col 21 lines 15-40). Thus the level of certainty is determined for each face candidate region including the boundary or contour as seen in (Figs 5A-5C). Col 20 lines 3-67 explain the weightings concept in the determination of the probability of the face and the background regions. The probability of coincidence with the actual face is low (low level) at Col 20 lines 60-67). Kinjo discloses correction of the image at Col 36 ,however is silent and does not expressly recite applying correction processing to a boundary part which is less than the entire detected boundary and which is judged not to be a true contour of the person **(pixel at the edge of an object which is blending of the foreground and the background and does not clearly belong to the object or true contour of an object at Col 1 lines 18-22)**, for concealing the boundary part, in the created composite image.

Wilensky discloses determining the pixels which belongs to the border region of the object **(Col 1 lines 28-31)** based on the geometric criteria **(hair and fur shapes of the object at Col 1 lines 25-27)** and correcting **(color decontaminating at Col 1 lines 32)** only the pixels having colors from both the object and the background need to be cleaned out so they only contain the color of the object **(Col 1 lines 32-34 which means that pixels (only a portion and not the whole) which are to be corrected do not clearly belong to the object nor the background, but they are belonging to both (blended) and represent only a portion of the whole border or the boundary)**. Wilensky

disclose an accurate method of extraction and correction in the complex background at **(Col 1 lines 6-34 and Col 2 lines 15-20)**. Kinjo discloses that the method and apparatus as disclosed improves the probability of determining the portions of the images **(i.e the contour of the person and the background)** due to a subsequent extraction in another method and as such compensating for the errors **(i.e. accurate or error free extraction of the principal portions of the images** at **Col 2 lines 56-67).** Kinjo, Wilensky and Blank are from the same field of endeavor and are analogous art therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the teachings of Kinjo **(accurately determining the principal portions of the images by improving the probability (i.e level of certainty) as explained above)** and Wilensky (**accurate extraction or object in the complex background and correcting only the pixels that belong to a blended potion of the background and the object as discussed above)** in the method and apparatus of Blank for the above reasons.

2. Regarding Claim 2, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 1. Wilensky discloses the color decontamination at **(Col 1 lines 28-34)** which cleans up the colored pixels **(image)** belonging to both the object and the background **(not to be a true contour of a person or object)** so they contain only colors of the object **(another image pixels having color of the object)**. The pixels which are color

decontaminated neither belong to the object edge or boundary nor the background pixels but belong both to the foreground and the background after the determination of the pixels belonging to the border of the object at **(Col 1 lines 28-34)**.

3. Regarding Claim 3, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 1. Wilensky discloses the color decontamination at **(Col 1 lines 28-34)** which cleans up **(replacing or shifting the image or pixels with the pixels of the object)** the colored pixels **(image)** belonging to both the object and the background **(not to be a true contour of a person or object)** so they contain only colors of the object.

4. Claim 4 is a corresponding apparatus claim of a method of Claim 1. See the explanation of Claim 1. Blank further discloses the apparatus in **(Figs 1, 2 and 3).**

5. Claim 5 is a corresponding apparatus claim of a method of Claim 2. See the explanation of Claim 2. Blank further discloses the apparatus in **(Figs 1,2 and 3).**

6. Claim 6 is a corresponding apparatus claim of a method of Claim 3. See the explanation of Claim 3. Blank further discloses the apparatus in **(Figs 1,2 and 3).**

7. Regarding Claim 10, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 1. Blank further discloses wherein said background is arbitrary in **(Col 6 Lines 18-20)**.

8. Regarding claim 14, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 1. Kinjo disclose further wherein said determining step determines whether a boundary part of the detected boundary is a boundary part with high certainty as a contour of the person, **or** whether or a boundary part of the detected boundary is a boundary part with low certainty as a contour of the person at **(Col 20 lines 42-67 where the high probability of the contour of a person (face) has highest weights and the background or the non-face (boundary part with Low certainty has low probability)**.

9. Claim 16 is a corresponding apparatus claim of claim 10. See the explanation of claim 10.

10. Claim 19 is a corresponding apparatus claim of claim 14. See the explanation of claim 14.

11. Regarding claim 21, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 1. Blank discloses the extraction of the portrait image of a person **(which includes facial parts)**. Wilensky also

discloses extracting baby portrait as seen in Fig 3a. Blank and Wilensky are however silent and do not expressly recite extracting facial parts. Kinjo disclose wherein said extracting step is performed for extracting facial parts **(Figs 5A-5C where the extraction of the facial region including the parts is shown)**.

12. Claim 23 is a corresponding apparatus claim of claim 21. See the explanation of claim 21.

13. Regarding Claim 7, see the explanation of claim 1 and Kinjo also discloses based on the geometric criteria **(col 25 lines 3—36 where extraction is based on the shapes degree of coincidence)** a boundary part representing the contour of the person with low certainty at **(Kinjo discloses extracting the shape corresponding to the principal region i.e face of the person and eliminates the region corresponding to the background Col 9 lines 29-39 and Col 18 Lines 10-20, Col 18 lines 53-65 where each portion of the non-background (face of the human) region is extracted (detected) due to the determination of the each region being the background region. The level of certainty is determined by the regions overall weighting coefficient. The region with the highest score is the region having the highest probability of being a face (contour of a person) of the human figure (level of certainty at col 21 lines 15-40. Thus the level of certainty is determined for each face candidate region including the boundary or contour as seen in (Figs 5A-**

5C). Col 20 lines 3-67 explain the weightings concept in the determination of the probability of the face and the background regions).

14. Regarding Claim 8, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 7. Wilensky discloses the color decontamination at **(Col 1 lines 28-34)** which cleans up the colored pixels **(image)** belonging to both the object and the background **(not to be a true contour of a person or object)** so they contain only colors of the object **(another image pixels having color of the object)**. The pixels which are color decontaminated neither belong to the object edge or boundary nor the background pixels but belong both to the foreground and the background after the determination of the pixels belonging to the border of the object at **(Col 1 lines 28-34)**.

15. Regarding Claim 9, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 7. Wilensky discloses the color decontamination at **(Col 1 lines 28-34)** which cleans up **(replacing or shifting the image or pixels with the pixels of the object)** the colored pixels **(image)** belonging to both the object and the background **(not to be a true contour of a person or object)** so they contain only colors of the object.

16. Regarding Claim 25, Blank, Kinjo and Wilensky disclose the portrait image processing method according to claim 7. Blank discloses the extraction of the portrait image of a person **(which includes facial parts)**. Wilensky also discloses extracting baby portrait as seen in Fig 3a. Blank and Wilensky are however silent and do not expressly recite extracting facial parts. Kinjo disclose wherein said extracting step is performed for extracting facial parts **(Figs 5A-5C where the extraction of the facial region including the parts is shown)**.

Claim 11-12, 17-18 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Blank in view of Kinjo, Wilensky and in further view of 5577179 as best understood by the examiner.

17. Regarding Claim 11, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 1. Kinjo discloses the level of certainty of facial parts at **(Figs 5A-5C where face candidates are extracted)**. Blank discloses the extraction of an object which is a human being, however is silent and does not expressly recite wherein said extracting step extracts facial parts from the original image, the facial parts including at least one of eyes, nose and mouth. 5577179 at **(Col 14 lines 60-63)** disclose where the file header contains the information regarding the location of the eyes, which is used for extraction. 5577179 further discloses that such a digital image editing system can automatically size, position, layer the digital image of a replacement object or

multiple objects into a predetermined background at a desired depth, match, produce a pleasing appearance, easy to implement and cost effective to use at **(Col 3 Lines 23 and 41-48)**. Blank, Kinjo, Wilensky and 5577179 are from the same field of endeavor and are analogous art, therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the teachings of 5577179 in the image editing system of Blank, Kinjo, Wilensky for the above reasons.

18. Regarding Claim 12, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 1. Kinjo discloses the degree of certainty using the weight score **(positional relationship Col 20 lines 3-67)** between the facial parts and the background. Kinjo further discloses the positional relationship in the extraction of the face **(i.e detecting the boundary and the background at col 18 lines 17-18)**. 5577179 also further disclose wherein said step of detecting a boundary uses an average positional relationship **(by proportionately sizing up or down which is averaging the position between the up and the down Col 15 lines 17-20)** between a position of a facial part and a boundary of a person and a background, to detect the boundary at **(Figs 4e, 4f, 4g and Col 14 Lines 38-57 and Col 15 Lines 5-23)**. 5577179 use the positional relation between the **(facial parts eyes, neck),** the edge of the person **(object)** and the background person **(background in the present context)** to detect the boundary as shown in the figures.

19. Claim 17 is a corresponding apparatus claim of claim 11. See the explanation of claim 11.

20. Claim 18 is a corresponding apparatus claim of claim 12. See the explanation of claim 12.

Claims 13 , 15 , 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blank in view of Kinjo, Wilensky and in further view of Lee (US 20030058939) hereafter Lee as best understood by the examiner.

21. Regarding Claim 13, Blank, Kinjo and Wilensky discloses the portrait image processing method according to claim 1. Blank discloses extraction of a person from the background as seen in **(Figs 7A-7D)**. Kinjo discloses the degree of certainty based on the weight score between the face area and the background **(at Col 20 Lines 3-67)**. Wilensky discloses extraction of the background and the foreground (fig 1). Blank, Kinjo and Wilensky are silent and does not expressly recite wherein said extracting step extracts a skin color in the original image, sequentially applies area extension to connected areas, from a point of a skin color area, extracts a face area based on a shape of a face, and extracts a hair area above the face area, and/or a neck and chest area below the face area, to extract the portrait image.

Lee discloses wherein said extracting step extracts a skin color in the original image, sequentially applies area extension to connected areas, from a point of a skin color area, extracts a face area based on a shape of a face, and extracts a hair area above the face area, and/or a neck and chest area below the face area, to extract the portrait image. Lee in **(Fig 7 and 8)** discloses the face extraction and gridding of skin color for the extraction. Lee at **(Page 1 Para 15-17)** discloses a precise technique of facial extraction. Lee further discloses the extraction of facial parts and a general region of the human being which would include the portions such as hair chest etc at **(Page 4 Para 0061)**. Blank, Kinjo, Wilensky and Lee are from analogous art and are from the same field of endeavor, therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the teachings of Kinjo and Lee in the system and process of Blank for the above reasons.

22. Regarding claim 15, Blank, Kinjo and Wilensky disclose the portrait image processing method according to claim 14. Kinjo further discloses wherein a boundary part with low certainty is one of a boundary part where a length between coordinate points on the boundary is partially larger than a decided value (precondition), due to unevenness of the boundary at **(at Col 20 Lines 3-67 where the weight score is decided based on the precondition to decide the boundary part of the contours of a person and the background)**. Kinjo discloses the extraction of the facial candidates **(which includes the skin color as seen figs 5a-5C)**. Kinjo is silent and however does not expressly recite only

for a person however Lee discloses the database of range of several people facial skin colors **(Page 1 Para 0015)** which would be obvious to use for more persons as claimed in claim 15.

23. Regarding Claim 20, Blank, Kinjo and Wilensky disclose the portrait image processing apparatus according to claim 19. Kinjo further discloses wherein a boundary part with low certainty is one of a boundary part where a length between coordinate points on the boundary is partially larger than a decided value (precondition value), due to unevenness of the boundary at **(at Col 20 Lines 3-67 where the weight score is decided based on the precondition to decide the boundary part of the contours of a person and the background)**. Kinjo is silent and however does not expressly recite only for a person however Lee discloses the database of range of several people facial skin colors **(Page 1 Para 0015)** which would be obvious to use for more persons as claimed in claim 20.

Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blank in view of Kinjo, Wilensky and in further view of Schindler (US 5630037) hereafter Schindler as best understood by the examiner.

24. Regarding claim 27, Blank, Kinjo and Wilensky disclose the portrait image processing method according to claim 1. Wilensky discloses determining the

pixels which belongs to the border region of the object **(Col 1 lines 28-31)** based on the geometric criteria **(hair and fur shapes of the object at Col 1 lines 25-27)** and correcting **(color decontaminating at Col 1 lines 32)** only the pixels having colors from both the object and the background need to be cleaned out so they only contain the color of the object **(Col 1 lines 32-34 which means that pixels (only a portion and not the whole) which are to be corrected do not clearly belong to the object nor the background, but they are belonging to both (blended) and represent only a portion of the whole border or the boundary)**. Kinjo discloses detecting the boundary part representing the contour of the person with low certainty **(probability of coincidence with the actual face or contour is low at Col 20 Lines 60-67)**, however Blank, Kinjo and Wilensky are silent and do not expressly recite wherein said step of applying correction processing is performed only for a boundary part representing a contour of the person with low certainty.

Schindler discloses applying correction processing is performed only for a boundary part representing a contour of the person with low certainty **(Schindler discloses segmenting the image into foreground, background and fringe pixels located near the foreground (boundary part with low certainty of being an actual contour of the object) at Col 2 Lines 43-45 and further discloses touching up (correcting) the fringe regions of the extracted image into the composite image at (Col 2 lines 53-57))**. Schindler discloses the method and apparatus which is fast and efficient for composition of

foreground against an arbitrary background and touching up the subject borders (fringe pixels) at **(Col 2 lines 4-24)**. Blank, Kinjo, Wilensky and Schindler are from the same field of endeavor and are analogous art, therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the teachings of fast and efficient composition and correction of fringe pixels in the method of blank and Kinjo for the above reasons.

25. Claim 28 is a corresponding apparatus claim of claim 27. See the explanation of claim 27.

Claims 22, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blank in view of Haskell et al (US 6618444) hereafter Haskell.

26. Regarding claim 22, Blank discloses a portrait image processing method comprising the steps of:

extracting a portrait image from a an original image including a person and a background **(Col 2 Lines 60-68 by extracting the portions inside and outside of the edge thereby extracting the portrait from the background and Col 9 Lines 3-8)**;

compositing the extracted portrait image and a background image prepared in advance **(integrating into a preselected background)** to create a composite image at **(Col 3 Lines 56-67)**;

detecting a boundary of the person and the background from the original image**(Col 2 Lines 60-67,Col 9 Lines 3-14 and Col 8 Lines 44-49)**.Blank discloses detecting the contour of a person as seen in Figs **(5A-5E)** and **(7A-7d)** and Blank also discloses applying the correction and applying correction processing to a boundary part which is judged not to be a true contour of the person **(Col 4 Lines 28-33 where the correction is applied to the object (which has a boundary) and the background as seen in the fig7C)**, for concealing the boundary part **(contiguous to the edge)** in the created composite image at **(Col 4 Lines 17-27, Col 9 Lines 36-45 and Figs 5d-5e)**. Blank is silent and however do not expressly recite judging whether or not the detected boundary is a true contour of the person for each part of the boundary: and applying correction processing to a boundary part which is less than the entire detected boundary, and which is judged not to be a true contour of the person, for concealing the boundary part, in the created composite image, wherein, said judging step determines whether a boundary part of the detected boundary is a boundary part with low certainty as a contour of the person, wherein a boundary part with low certainty corresponds to a boundary part with a shape different from a shape of a reference contour, or a boundary part where a length between coordinate points on the boundary is partially larger than a decided value due to unevenness of the boundary, or a boundary part which is out of a range of a reference contour line.

Haskell discloses judging whether or not the detected boundary is a true contour of the person for each part of the boundary **(at Col 6 lines 58-63 where the macroblocks are identified or judged to be belonging to the inside of the object, outside of the object or on the object boundary (the macro block has both pixels belonging to the inside and outside) and further assigns codes to each of the macroblocks at col 7 lines 1-43)**: and

applying correction **(chroma-keying)** processing to a boundary part which is less than the entire detected boundary **(the chroma- key replacement of the background pixels is performed only for boundary macroblocks and replacing the background pixels in the boundary macroblocks with the chroma-key implicitely codes the shape information of the object at Col 7 lines 50-53)**, and which is judged not to be a true contour of the person **(background pixels in the boundary macroblocks are the pixels judged not belonging a true edge of the object at Col 7 lines 40-55)**, for concealing the boundary part, in the created composite image **(shape of the object and the background is recovered at the decoder where a composite image is constructed at Col 12 lines 63-67)**,

wherein, said judging step determines whether a boundary part of the detected boundary is a boundary part with low certainty as a contour of the person, wherein a boundary part with low certainty corresponds to a boundary part which is out of a range of a reference contour line **(Table 2 which shows that the pixels in the macroblock that are judged 10 and 11 are having low**

certainty and are out of range (inside or outside) from the actual boundary 0 or reference contour line). Haskell discloses the improved chroma-key shape representation of the objects which reduces the bandwidth which are particularly vital for mobile and wireless applications at **(Col 1 lines 24-25 and Col 2 lines 28-36)**. Haskell and Blank are from the same field of endeavor and are analogous art therefore it would be obvious for one of ordinary skill in the art to utilize the techniques of Haskell **(chroma-key shape correction)** in to the method and apparatus of Blank **(segmenting and creating a composite image with another background)** for the above reasons.

27. Regarding claim 26 see the explanation of claim 22.

28. Claim 24 is a corresponding apparatus claim of claim 22. see the explanation of claim 22.

Alternate rejection

Claims 1, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parulski et al. (US 5914748) hereafter Parulski in view of Haskell as best understood by the examiner.

29. Regarding claim 1, Parulski discloses a portrait image processing method comprising the steps of;

extracting **(using a foreground mask Fig 1 step 24 an image of a**

person is extracted from the background) a portrait image from an original image including a person and a background;

compositing the extracted portrait image **(foreground mask image in fig 1)** and a background image prepared in advance **(new background selected from the stored background as seen in fig 1 step 30)** to create a composite image **(composite image at step 26 fig 1)**;

detecting a boundary of the person and the background from the original image **(Col 5 lines 57-60 where the boundary between the foreground and the background is detected)**. Parulski discloses segmenting the foreground and the background using binarization as seen in Col 5 , however is silent and determining, based on geometric criteria, a level of certainty as to whether or not the detected boundary is a true contour of the person for each part of the detected boundary; and applying correction processing to a boundary part which is less than the entire detected boundary and which is judged not to be a true contour of the person, for concealing the boundary part, in the created composite image.

Haskell discloses determining based on geometric criteria **(chroma-keying implicitely coding shape at col 7 lines 54)**, a level of certainty **(by using codes as seen in table 1 and 2 at different levels of 0-11 etc)** whether or not the detected boundary is a true contour of the person for each part of the boundary **(at Col 6 lines 58-63 where the macroblocks are identified or judged to be belonging to the inside of the object, outside of the object or**

on the object boundary (the macro block has both pixels belonging to the inside and outside) and further assigns codes to each of the macroblocks at col 7 lines 1-43): and

applying correction **(chroma-keying)** processing to a boundary part which is less than the entire detected boundary **(the chroma- key replacement of the background pixels is performed only for boundary macroblocks and replacing the background pixels in the boundary macroblocks with the chroma-key implicitely codes the shape information of the object at Col 7 lines 50-53)**, and which is judged not to be a true contour of the person **(background pixels in the boundary macroblocks are the pixels judged not belonging a true edge of the object at Col 7 lines 40-55)**, for concealing the boundary part, in the created composite image **(shape of the object and the background is recovered at the decoder where a composite image is constructed at Col 12 lines 63-67)**. Haskell discloses the improved chroma-key shape representation of the objects which reduces the bandwidth which are particularly vital for mobile and wireless applications at **(Col 1 lines 24-25 and Col 2 lines 28-36)**. Haskell and Parulski are from the same field of endeavor and are analogous art therefore it would be obvious for one of ordinary skill in the art to utilize the techniques of Haskell **(chroma-key shape correction)** in to the method and apparatus of Parulski **(segmenting and creating a composite image with another background)** for the above reasons.

30. Claim 4 is a corresponding apparatus claim of claim 1. See the explanation of claim 1.

31. Regarding claim 7 see the explanation of claim 1.

Other cited prior art

The other cited prior art made of record but not relied on are (US 6300955), (US 5204918), (US 6122014) , (US 7212674), (US 6970595), (US 7158177) and ((US 7519236).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAYESH A. PATEL whose telephone number is (571)270-1227. The examiner can normally be reached on M-F 7.00am to 4.30 pm (5-4-9). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

04/15/2009
/Jayesh A Patel/
Examiner, Art Unit 2624

/Brian P. Werner/
Supervisory Patent Examiner, Art Unit 2624